

CLAIMS:

1. A method of generating image values of an output image, the method comprising the steps of
- defining a subdivision of the output image into regions of image locations,
 - providing a color look-up table,
 - 5 - providing a respective set of references to the color look-up table for each region,
 - providing a pixel map comprising a selection code for each image location,
 - selecting a particular reference to the color look-up table for a particular image location from the particular set provided for the region to which the particular image location belongs, by using the selection code as a pointer in that particular set,
 - 10 - wherein the pixel map is constructed by grouping the image locations in each region into groups according to a similarity of color values in a source image, the selection code identifying the group to which the image location belongs among the groups for the region,
- characterized in that the color look-up table is provided for the source image, all color values of the source image being in the color look-up table, the reference
- 15 used for the image locations in a particular group being constructed from at least one reference to the color look-up table which defines the color value in the source image for at least one image location in the particular group.
2. A method according to Claim 1 wherein the reference used for the image locations in the particular group is constructed by selecting a representative image location
- 20 from the particular group and taking the reference defining the color value for the representative image location in the source image.
3. A method according to Claim 2, wherein the representative image location is selected by determining a image property for each image location in the particular group from the color values in the source image for these image locations in the particular group,
- 25 and selecting as representative image location an image location for which the image property is non-extreme among the image properties of the image locations in the particular group.
4. A method according to Claim 3, wherein the representative image location is an image location which has a median value of the image property among the image

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properties of the image locations in the particular group.

5. A method according to Claim 3, wherein the image property is the luminance of the color value in the source image.

6. A method according to ^{claim 1} ~~anyone of Claims 1 to 5~~, wherein the output image

5 represents a pyramid of levels of increasingly higher resolution versions of a basic image, each level being subdivided into regions, the color look-up table being common for all levels, each level being associated with a respective pixel map, the particular reference to the color look-up table being selected for a particular image location at a particular level, from the particular set provided for the region for that level according to the pixel map for that level.

10 7. A method according to Claim 6, used for texture mapping in computer graphics, wherein the levels are different resolution levels of a mipmap.

8. A method of compressing a source image, the method comprising
dividing each of a set of regions in the source image into groups of image locations according to a similarity of color values of pixel locations of the group in the source image,
15 - providing a color look-up table,
- determining a respective reference to the color look-up table for each group,
- forming a compressed image containing an indication of respective groups to which respective pixels belong and the respective references corresponding to the groups, characterized in that the color look-up table is provided for the source image, all color values
20 of the source image being in the color look-up table, the reference used for the image locations in a particular group being constructed from at least one reference to the color look-up table which defines the color value in the source image for at least one image location in the particular group.

9. A machine readable medium comprising a program for compressing a
25 source image, the program comprising
- dividing each of a set of regions in the source image into groups of image locations according to a similarity of color values of pixel locations of the group in the source image,
- providing a color look-up table,
- determining a respective reference to the color look-up table for each group,
30 - forming a compressed image containing an indication of respective groups to which respective pixels belong and the respective references corresponding to the groups, characterized in that the color look-up table is provided for the source image, all color values of the source image being in the color look-up table, the reference used for the image locations in a particular group being constructed from at least one reference to the color

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look-up table which defines the color value in the source image for at least one image location in the particular group.

10. A device for compressing a source image, the device comprising

- means for dividing each of a set of regions in the source image into groups of image locations according to a similarity of color values of pixel locations of the group in the source image,

- means for providing a color look-up table,

- means for determining a respective reference to the color look-up table for each group,

- means for forming a compressed image containing an indication of respective groups to

which respective pixels belong and the respective references corresponding to the groups, characterized in that the color look-up table is provided for the source image, all color values of the source image being in the color look-up table, the reference used for the image locations in a particular group being constructed from at least one reference to the color look-up table which defines the color value in the source image for at least one image location in the particular group.

11. A device as claimed in Claim 10, wherein the reference used for the image locations in the particular group is constructed by selecting a representative image location from the particular group and taking the reference defining the color value for the representative image location in the source image.

12. A device as claimed in claim 11, wherein the representative image location is selected by determining a image property for each image location in the particular group from the color values in the source image for these image locations in the particular group, and selecting as representative image location an image location for which the image property is non-extreme among the image properties of the image locations in the particular group.

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